

New Deadline for Nominations for AAAS-Rosenstiel Award in Oceanographic Science

The deadline for submission of nominations for the \$5000 AAAS-Rosenstiel Award in Oceanographic Science, which the Association will administer for the first time this year, has been changed from 1 July to 1 September. As stated in the 2 May issue of *Science*, the 1975 award will honor outstanding work in the field of geology, physics, and chemistry of the seabed.

Nominations, including adequate justification (one or two pages) and a list of the nominee's relevant publications, should be sent to the Chairman of the Selection Panel, Dr. Joshua I. Tracey, U.S. Geological Survey National Center, MS 915, 12201 Sunrise Valley, Reston, Virginia 22092.

and on, for the tribes of the Americas are many and their traditional knowledge and experience richly varied. To all the fields of science, engineering and medicine, one or more of these groups has made discoveries of importance and applied their knowledge to the solution of practical problems of existence. Natural and social scientists are just beginning to appreciate the wealth of those traditions and to research and evaluate the Native Americans' contributions.

The Need for Interdisciplinary Research

So segregated are the professional lives of most social and natural scientists that they lack understanding of each other's work. Natural scientists' training provides them with little that prepares them to know about or even be aware that these "primitive" peoples possess sophisticated knowledge and skills. Our scientists in most cases are not even aware of how deeply embedded our own science is in cultural suppositions that are not universal (12). Social scientists, on the other hand, are often so poorly trained in the natural sciences that they are inadequately equipped to recognize the scientifically valuable experience of traditional societies, since they are usually ignorant of natural science and often in awe of it.

It is imperative that the present generation of natural and social scientists recognize the need for interdisciplinary research before it is too late. Peter Raven, Director of the Missouri Botanical Garden, is seriously concerned that it will soon be too late for scientists to make such studies. As Raven, Berlin, and Breedlove argue in their article on "The origins of taxonomy," we need to study the 10 million species of organisms in the world because 80 percent may well become extinct before they can be inventoried (13). Raven also points out that philosophical differences among tax-

onomies are important, are to be respected, and are useful to scientists in perfecting our own systems and analyses. Rapid worldwide social and cultural change is sweeping away many traditional ways. "As these cultures are lost, the world loses a diversity that can never be recovered. As their languages fall into disuse, we are losing the change to get a handle on this. This is a matter of major scientific concern," says Raven (14). The kind of effort that he, Berlin, and Breedlove have devoted to Highland Maya plant knowledge should be undertaken for all traditional communities where botanical and zoological knowledge is still intact.

—JANET W. BROWN

References

1. This article is the culmination of investigations made by the author at the behest of the Committee on Opportunities in Science, which initiated the AAAS resolution on Native American Contributions to Science, Engineering and Medicine. The author is indebted for advice and assistance to Margaret Mead, William Sturtevant, Alfonso Ortiz, and Michael Dorris.
2. P. H. Raven, B. Berlin, D. E. Breedlove, *Principles of Tzeltal Plant Classification* (Academic Press, New York, 1974).
3. R. E. Schultes and A. Hofman, *The Botany and Chemistry of Hallucinogens* (Thomas, Springfield, Ill., 1973).
4. A. Weil, personal communication.
5. G. Beadle, personal communication. See also J. H. Kempton, "Maize, our heritage from the Indian," in *Smithsonian Institution Annual Report 1937* (Government Printing Office, Washington, D.C., 1938).
6. S. H. Katz, M. L. Hediger, L. A. Valleroy, *Science* **184**, 765 (1974).
7. V. J. Vogel, *American Indian Medicine* (Ballantine, New York, 1973).
8. —, *ibid.*, p. 230. See also B. O. de Montellano, "Empirical Aztec medicine," *Science* **188**, 215 (1975), for a discussion of empirical research of Aztec doctors and an evaluation of the effectiveness of their medicinal herbs.
9. A. Ortiz, in *The World of the American Indian* (National Geographic Society, Washington, D.C., 1974), pp. 157–201, and personal communication.
10. J. A. Eddy, *Science* **184**, 1035 (1974). See also A. F. Aveni, S. L. Gibbs, H. Hartung, *ibid.* **188**, 977 (1975).
11. T. H. Lewis, *ibid.* **187**, 14 (1975).
12. M. Mead, "Anthropologists, scientists and laity," in *The Sciences*, 7 (Nos. 6 and 7) (November–December 1967).
13. P. H. Raven, B. Berlin, D. E. Breedlove, *Science* **174**, 1210 (1971).
14. P. H. Raven, personal communication.

Notes from Other Offices

Science and Society: Dr. Dixon Long of the AAAS Committee on Science and Public Policy testified before the new Subcommittee on Domestic and International Planning and Analysis of the House Science and Technology Committee on observations regarding the reporting of federal R & D program expenditures and steps the subcommittee might take in the near future to carry out its responsibility for "special oversight" of the nonmilitary R & D budget. He was accompanied by Dr. John Logsdon, also of the AAAS committee, and Dr. Richard Scribner of the AAAS staff. Copies of the submitted statement are available on request.

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Science Education: Under a grant from the U.S. National Science Foundation the Education Office is working with ten school systems, having large minority group populations, to assist them in implementing the elementary school science program *Science—A Process Approach*. Representatives of the school systems will meet at AAAS from 7 to 18 July.

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Opportunities in Science: A "Comprehensive Annotated Bibliography of Science Education Projects for Minority Students, 1960–1975" will be produced by the Office of Opportunities in Science this year. Funded by the National Science Foundation, the project will collect and categorize natural science efforts at all levels to improve science education for minorities. Any information on such projects is welcome.

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International Science: A report and summary record of a Research Workshop on the relevance of satellite data for anthropological research will be available in July 1975 through the Office of International Science. The report stresses the importance of anthropologists making feasibility studies utilizing satellite data, the present state of the art in data interpretation, and possible future developments. A series of appendices includes bibliographic materials, examples of different kinds of imagery, how to gain access to satellite data, and several recommendations, including the desirability of a Technology Committee by the American Anthropological Association to evaluate and monitor technological developments in re-

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mote sensing on anthropology. The report also draws attention to the input requested by the United Nations from behavioral scientists for forthcoming U.N. conferences on the habitat (1976) and desertification (1977). The Research Workshop was sponsored by the National Science Foundation and hosted by the AAAS, from 27 to 30 May, in Washington, D.C.

NOVA Program Schedule

1 July. *What Time Is Your Body?* Biological clocks in plants, insects, animals, and man; and what happens when they start running at their own speed (BBC).

8 July. *The Rise and Fall of DDT*. A re-examination of the banning of DDT, once a wonder chemical and now a symbol of ecological doom (BBC).

15 July. *The First Signs of Washoe* (repeat). Have the chimpanzees breached one of the traditional bastions of man's uniqueness, his ability to use language? (WGBH).

22 July. *Take the World from Another Point of View*. NOVA visits two very different scientists: Richard Feynman, a theoretical physicist and Nobel Laureate; and Jonathan King, a biologist just beginning to win acceptance from his peers, and deeply troubled about the social role of science (WGBH).

29 July. *The Lysenko Affair*. A dramatic reconstruction of the battle between the Lysenkoists and the classical geneticists that raged in the Soviet Union for 20 years and abruptly ended in 1948 when Stalin announced his support of Lysenko (BBC/WGBH).

Survey of Affiliates' Equal Opportunity Policies

The conviction of the AAAS Committee on Opportunities in Science that firm policy statements are a necessary first step in the achievement of equal opportunity stimulated the Association's Board of Directors to issue a statement of the AAAS's continuing commitment to equal opportunity. In March 1974, the Board passed a resolution to this effect, noting that the Association practices equal opportunity in its personnel policies and by attempting to increase the participation of women and minorities in all of its activities. The resolution recognized past discouragement of women and minorities and the denial to them of equal access, and called upon As-

Members and their colleagues in Greater New York who would be interested in offering their assistance in programs organized jointly by the Junior Academy of the New York Academy of Sciences and the AAAS are asked to contact the AAAS Communications Department for further information.

sociation affiliates to join with the AAAS in taking all possible actions to eliminate the effects of discrimination.

Circulation of the policy statement to affiliates constituted the third informal survey that the Association has made since 1972 of its affiliates' equal opportunity efforts. The positive tone of affiliates' responses was encouraging. Thirty-two of the 47 that responded indicated that they had similar policies or had them under consideration. Others reported on activities that were undertaken to increase minority and female participation in their professions. Eight organizations responded that they already had such policies,* and 13 others officially endorsed the AAAS statement.†

The responses reported what affiliates are doing and offered suggestions on what all professional organizations might do. Several commented on the necessity for reiterating and publishing policy statements in their professional journals. Others spoke of the necessity for scientists to work with counselors and teachers of young people, or of launching a public education program to encourage minorities and women to consider careers in science. The American Psychological Association (APA) invited the AAAS and affiliates to join in their vendors project, in which the APA is attempting to bring pressure on the organizations with which it does business, to foster equal employment within their own ranks.

The full text of the Board resolution and a tally of affiliate responses is available from the Office of Opportunities in Science.—JANET W. BROWN

*Organizations Having Equal Opportunity Policies at Time of AAAS Survey: American Association of University Professors, American Economic Association, American Library Association, American Society of Mechanical Engineers, American Statistical Association, Institute of Electrical and Electronics Engineers, Society for Technical Communication, and Society of Exploration Geophysicists. †Organizations Officially Endorsing AAAS Equal Opportunity Statement: American Geographical Society, American Physiological Society, American Psychiatric Association, American Society for Microbiology, American Society of Agricultural Engineers, American Society of Civil Engineers, American Sociological Association, Arctic Institute, Institute of Food Technologists, Institute of Management Sciences, Society for Investigative Dermatology, Society for the History of Technology, and Tau Beta Pi Association.

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Electron Microscopist, Plant Physiologist, Ph.D. High resolution microscopy of enzyme complexes on membranes of bacteria, plants, retinas, and tissue culture associations by immuno- and cytochemical labels. Publications and experience. EM lab operation or research and teaching. Box 291, SCIENCE. 7/4, 11

Environmental/Physical Chemist, Ph.D. Air and water quality, aerosol technology, analytical methods, materials science. Academic and industrial experience. Box 292, SCIENCE. X

Immunobiologist, Ph.D., 20 years of research, some teaching, many publications, fellowship awards. Desires teaching and/or research. Box 281, SCIENCE. 7/4

Mammalian Physiologist, Ph.D. August 1975. Seek postdoctoral training in research area of hemorrhagic shock and/or fluid-electrolyte balance. Box 293, SCIENCE. X

Neurobiologist Biochemist Electron Microscopist, Ph.D., biochemistry, 1973. Two years postdoctoral: electrophysiology, TEM. Protein purification, small animal surgery, computer programming. Current interests: neurotoxins, neurotransmission mechanisms. Publications. Seeks academic/industrial position. D. Pumphlin, 256 San Sebastian, San Juan, Puerto Rico 00901. X